Gulf of Mexico Harmful Algal Bloom Bulletin

31 December 2007

NOAA Ocean Service

NOAA Satellites and Information Service

Last bulletin: December 31, 2007

Conditions Report

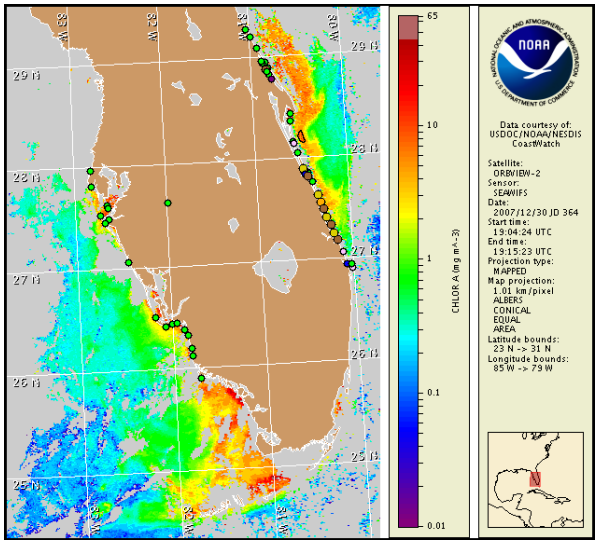
E Florida: A harmful algal bloom is present from southern Volusia County to northern Palm Beach County. Today through Thursday, patchy moderate impacts are possible in southern Brevard and southern Indian River Counties, patchy low impacts are possible in southern Volusia, northern Indian River and northern St. Lucie Counties, and patchy very low impacts are possible in northern Palm Beach County. In northern to central Brevard County, patchy low impacts are possible today and Thursday, with patchy very low impacts possible Tuesday through Wednesday. Patchy very low impacts are possible in Martin and southern St. Lucie Counties today through Wednesday, with patchy moderate impacts possible on Thursday. No impacts are expected elsewhere along northeast Florida through Thursday, January 3.

SW Florida: Harmful algae has been identified in northern Sarasota County. Patchy very low impacts are possible in northern Sarasota County today through Thursday. No impacts are expected elsewhere in southwest Florida through Thursday, January 3.

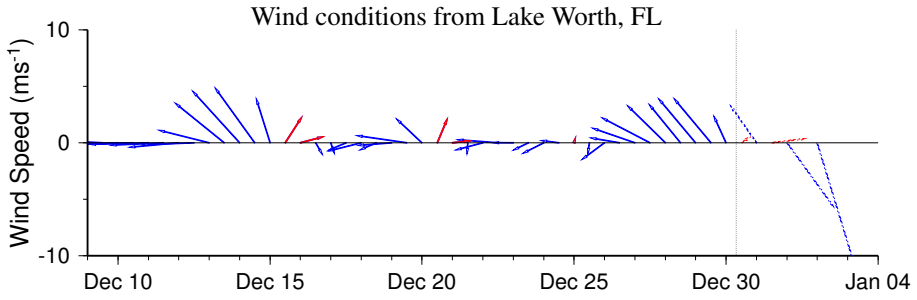
Analysis

E Florida: A harmful algal bloom is present from southern Volusia County to northern Palm Beach County. Recent samples confirm continued southward migration of the harmful algal bloom, with the new identification of very low to low *Karenia brevis* concentrations in northern Martin and Palm Beach Counties (FWRI, 12/27). *K. brevis* concentrations continue to diminish onshore in Volusia and northern Brevard Counties (FWRI, 12/17-12/27). Recent satellite imagery has been predominantly obscured along the coast of Martin and Palm Beach Counties; no elevated chlorophyll features are visible in this southern extent of the bloom. Chlorophyll levels continue to appear elevated up to 6μg/L along the coast from Volusia to St. Lucie County and >10μg/L in patches offshore Volusia County (maximum level at 29°5'48''N 80°33'46''W) and nearshore northern Brevard County (maximum level at 28°48'6''N 80°41'10''W). Respiratory irritation and discolored water were reported in Brevard County late last week (FWRI). The potential for impacts is greatest today in southern Volusia and Brevard Counties and throughout the entire bloom region on Thursday. Conditions this week are favorable for upwelling and intensification of *K. brevis*. Strong northwesterly winds Tuesday night and Wednesday will likely promote further southward progression of the bloom.

~Fisher, Allen



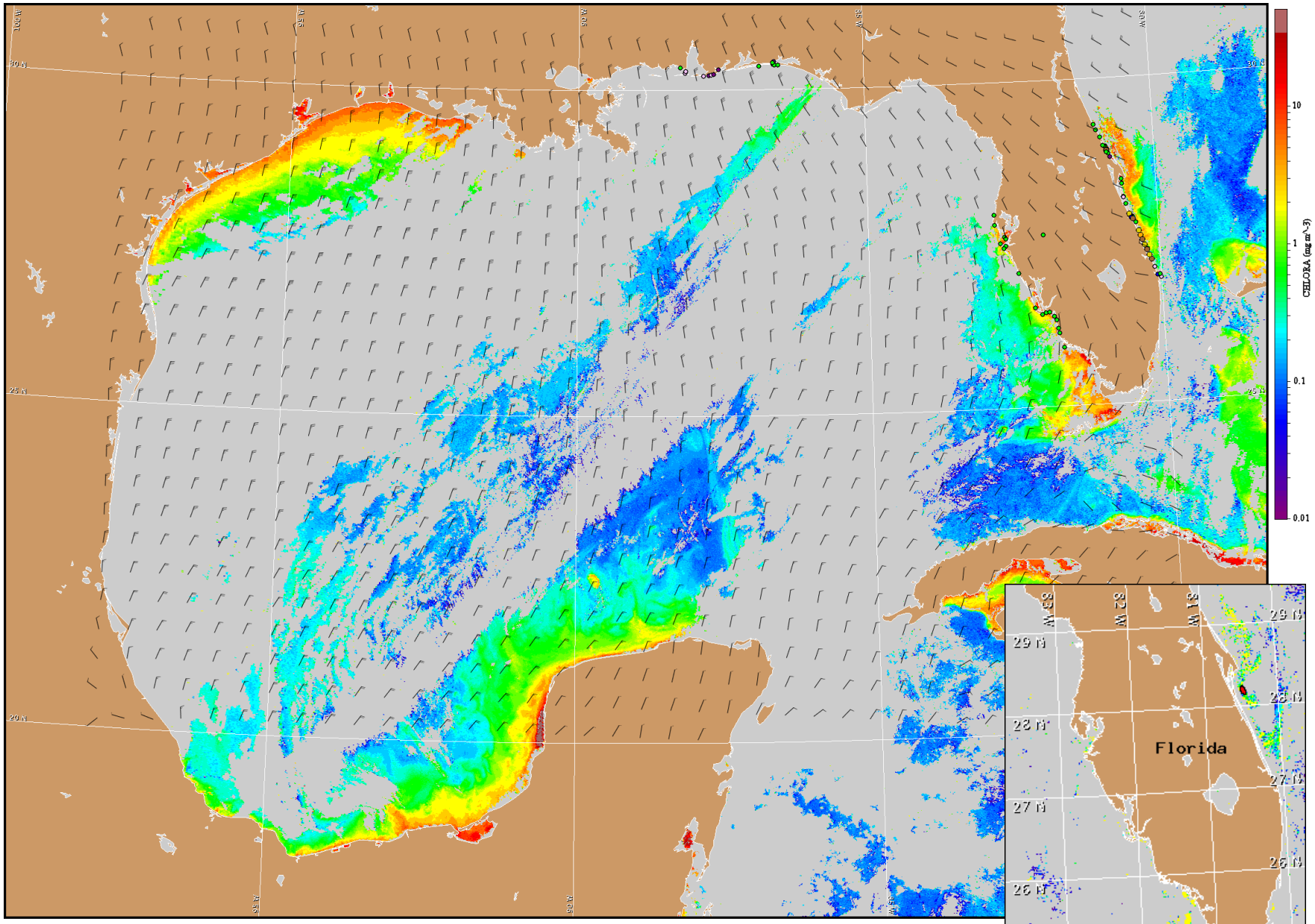
Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 26 to 27 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide:
http://www.csc.noaa.gov/crs/habf/habfs_bulletin_guide.pdf



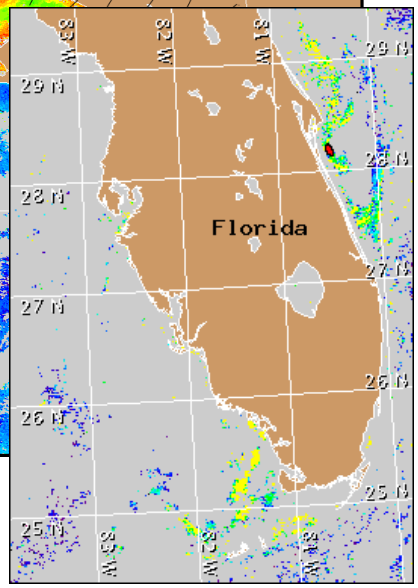
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

Southern Volusia-Brevard County: West to southwest winds (5-10kts, 3-5m/s), becoming southeast this afternoon. Northwest winds Tuesday (10-15kts, 5-8m/s) strengthening to 20-30kts (10-15m/s) through Wednesday night. Northeast winds (15-20kts, 8-10m/s) expected Thursday.

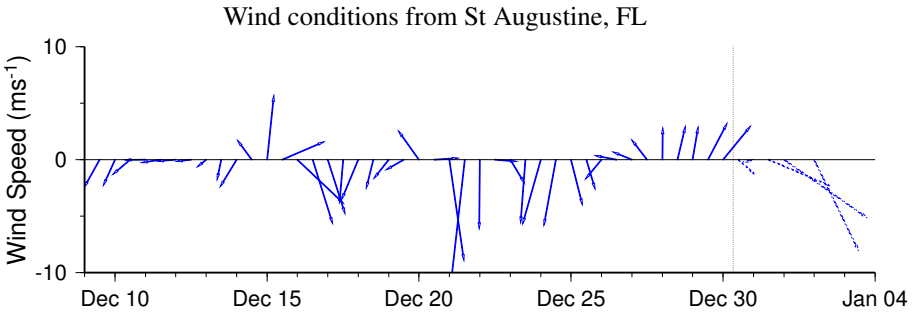
Indian River-Palm Beach County: South to southwest winds today and tonight (5-15kts, 3-8m/s). West winds becoming northwest Tuesday (10-15, 5-8m/s) and strengthening up to 30kts (13m/s) through Wednesday night. Northeast winds expected Thursday (15-20kts, 8-10m/s).



Satellite chlorophyll image and forecast winds for January 1, 2008 12Z with Cell concentration sampling data from December 26 to 27 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide: http://www.csc.noaa.gov/crs/habf/habfs_bulletin_guide.pdf



Verifi ed and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).


Wind conditions from St Augustine, FL
Wind Speed (ms-1)
10
0
-10
Dec 10
Dec 15
Dec 20
Dec 25
Dec 30
Jan 04